



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,218	08/24/2001	Hideaki Shoji	2576-113	1941

6449 7590 06/02/2006

ROTHWELL, FIGG, ERNST & MANBECK, P.C.  
1425 K STREET, N.W.  
SUITE 800  
WASHINGTON, DC 20005

EXAMINER

LE, KAREN L

ART UNIT PAPER NUMBER

2614

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/914,218	<b>Applicant(s)</b> SHOJI ET AL.	
	<b>Examiner</b> Karen L. Le	<b>Art Unit</b> 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1, 5 and 8-9 is/are rejected.
- 7) ☒ Claim(s) 2-4, 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monma et al. (U. S. 6,211,830) in view of Stolt (US 6,470,193).

Regarding claim 1, Monma teaches portable radio equipment provided with a radio unit (4)(Fig. 1, radio set 101) formed of a transmitting/receiving circuit within a cabinet, comprising:

at least two transmitting/receiving antennas (1, 2, 11)(Fig. 3, antenna 202 and 209). and a power distributor (5)(Fig. 3, load impedance 204 and 205) coupling each said antenna to said radio unit (Fig.1, radio set 101).

Monma does not teach two antennas different in direction of main polarization from each other. However, Stolt teaches two antennas different in direction of main polarization from each other such that at least two transmitting/receiving antennas operate simultaneously and weighting distribution amounts of power being dealt by the respective antennas (Col. 4, lines 40-53). Stolt teaches the simultaneous transmission with equal magnitude of perpendicularly oriented signals, such as vertically and

Art Unit: 2614

horizontally polarized signals, are uncoupled and thus do not interfere with each other.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Stolt's feature into Monma's system to provide two antennas operate simultaneously different in direction of main polarization from each other. Such is merely an old and popular in telephony system.

Regarding claim 5, Monma further teaches the portable radio equipment according to claim 1, further comprising:

a reception strength detector (12, 13)(Fig. 3, item 242) detecting received field strength of each of said at least two transmitting/receiving antennas (Fig. 3, item 208); a comparator comparing the received field strength detected by said reception strength detector with the weighting of the antenna given by said power distributor; and a control circuit controlling the weighting by said power distributor (Fig. 3, item 242) based on the comparison output of said comparator, to optimize a ratio of the power being fed to the respective antennas (Fig. 3, item 208).

Regarding claim 8, Monma further teaches the portable radio equipment according to claim 1, wherein said at least two transmitting/receiving antennas are placed orthogonal to each other (Fig. 2, item 202 and 203).

Regarding claim 9, Monma further teaches the portable radio equipment according to claim 1, wherein one of said at least two transmitting/receiving antennas is a whip antenna, and the rest of said antennas includes a meander antenna that is folded to meander so as to reduce the total length (Fig. 3, item 202 and 209).

***Allowable Subject Matter***

3. Claims 2-4 and 6-7 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1, 5, 8 and 9 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen L. Le whose telephone number is 571-272-7487. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Application/Control Number: 09/914,218

Page 5

Art Unit: 2614

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Wing Chan', written in a cursive style.

**WING CHAN**  
**SENIOR PRIMARY EXAMINER**  
**TECHNOLOGY CENTER 2600**

Karen Le  
KLL

May 30, 2006